Separation of Quad-Lead™ Wires

Quad-Lead™ wires are formed into a “ribbon cable” using Bond Coat 999 bonding film. This bonding agent will soften above 160 to 180 °C. Individual wires can be separated either by heat or with a rotary-abrasion style mechanical stripper (recommended: Eraser company RT2S Magnet Wire Stripper).

Do not separate the wires using any kind of sharp blade, as damage will result.

Do not heat wire above 220 °C.

Mechanical separation

Lake Shore uses an Eraser model RT2 magnet wire stripper. The rotating abrasive heads provide a smooth surface finish critical to separating the wires without nicks or cuts that will cause tearing of the insulation.

Automated stripping units that use abrasive rotating heads for “fine wire” or “magnet wire” should be okay to use, but it is advised to test any unit with the intended wire first.

- Do not use any kind of sharp blade, either in a machine-unit or by hand, to cut or otherwise separate the individual wires. This will cause cuts or nicks in the insulation which will cause tearing and separation of the insulation itself when the wires are separated further.
- Do not use any manual (by hand) method of sanding or scraping the insulation off as a means to separate the wires. This will cause a rough surface that will cause tearing and separation of the insulation itself when the wires are separated further.
- After the individual wires have been separated at the end, a gentle pulling force will further separate the wires to the length desired.

Separation using heat

Set a hot plate or other heater to between 160 °C and 200 °C.

**Hot-air guns are not recommended as control and distribution of heat to the wire is much more difficult. At the very least there must be a ‘hands-free’ setup as the wires must be separated while hot.

Take the end of the ribbon wire to be separated and place it on the hot surface. Using a pair of fine tweezers, gently push the individual wires apart. It may be necessary to bend them or fan them out slightly to prevent them from touching/re-bonding when removed from the heat.

- Any wire touching the hot surface may separate; be careful when handling the wire during this process.
- If the wires are not fully separated from each other while on the hot surface they may re-bond when removed. Do not try to separate wires after removing wire from the heat.
- If needed, after the individual wires have been separated at the end, a gentle pulling force will further separate the wires to a longer length if desired.
- **Only after the wires have been fully separated**—the insulation can be removed from the very ends using sandpaper or a razor

Do NOT use sandpaper or a razor or any other sharp blade to cut apart or otherwise separate the individual wires. This will damage the insulation and cause tearing and separation of the insulation itself when the wires are separated further.